

Office Action Summary

Application No.

10/524,070

Applicant(s)

CREEMERS, TIJSBERT MATHIEU
HENRICUS

Examiner

Pegeman Karimi

Art Unit

2609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 02/09/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
3. The phrase "claim 1", "claim 3", "claim 5" and "claim 9" on page 1, lines 2; page 2, lines 11 and 33; page 3, lines 14 and 25 of the specification should be deleted. This is due to the fact that these claims might be changed, renumbered, or canceled.
4. The reference of WO 00/38163 cited on page 1, line 6 of the specification should be provided so that it can be considered.

Claim Objections

5. Claims 4 and 5 are objected to because of the following informalities: Claim 4 and claim 5 refer to itself. Appropriate correction is required.

Drawings

6. On Fig. 1 the reference character "10" indicates reflector, it is unclear what is indicated by the same number on Fig. 2. It is understood that the character "10" on Fig. 2 is meant to be character "1".

7. Figures 3 and 4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Takeuchi (U.S. Patent 6,690,344).

As to claim 1, Takeuchi discloses a dynamic foil display device (10) for displaying image information (col. 11, line 19-21) comprising a light source for generating light (16, col. 28, lines 8-9),

a light guide (20) for transporting the generated light (col. 11, lines 32-34),

a plurality of controllably movable elements (30 and 22, col. 18, lines 55-58) associated with the light guide for locally bringing, in an active state (ON position), said movable element into contact with the light guide for coupling out light from the light guide so as to form a picture (col. 18, lines 27-34);

selection means comprising selection electrodes (48a) and data electrodes (48b) arranged in rows and columns respectively (col. 18, lines 67-68 and continuous in col.

9, line 1) for controlling the movable elements in correspondence with received image information (col. 25, lines 3-19),

wherein the selection electrodes (48a) are interconnected in a first and a second group of rows (280 and 282, odd and even rows), (see fig. 28); and

driving means (280 and 282) being arranged to provide the image information to the selection means corresponding to the rows of the first group and the rows of the second group respectively (col. 24, lines 45-49), characterized in that the selection electrodes of the first group and the selection electrodes of the second group are distributed evenly (col. 24, lines 50-54) in a lateral direction, parallel to a main direction of the light flux in the light guide (20), (Fig. 4, 48a is in parallel with light guide).

As to claim 2, Takeuchi teaches a selection electrode (48a) of the first group (280, odd number rows) is located between (even rows are located between odd rows) neighboring selection electrodes of the second group (282, even number rows).

As to claim 3, Takeuchi teaches a display device (10, 204, 206, 208, and 202) comprises timing means (Pc2) for dividing a field period (One Frame) of the received display information into consecutive subfields (SF1, SF2, etc., col. 19, lines 45-47) having an addressing period preceding a display period (col. 20, lines 35-40), the timing means further generating with the field period a predetermined order of weight factors (e.g. 64, 32, 16, 8, etc.) each associated with a corresponding one of the display periods (col. 20, lines 30-35);

a light source driver (16) which, upon receiving a drive signal (signal SK), activates the light source (red light, green light, blue light) during the display period (col. 28, lines 8-11), and

a driver circuit (206) for supplying a drive signal corresponding to the weight factors (col. 19, lines 34-47 and col. 27, lines 22-34).

As to claim 4, Takeuchi teaches the received display information comprises data words having binary coded weights (col. 20, lines 45-49), and

the timing means are adapted to generate the weight factors of the display periods within a field period so that each weight factor corresponds with one of the weights of the bits (col. 20, lines 50-56).

As to claim 5, Takeuchi teaches the light source comprises:

a first light source of a first color (Red light) and a second light source of a second color (Green light) and,

the timing means (506) are further arranged for dividing the field period of the received display information (col. 29, lines 2-8) into consecutive first sub-field periods (Fig. 40, first field) associated with the first color (Red), and consecutive second sub-

field periods (Second field) associated with the second color (Green) (col. 29, lines 12-22), and

the drive circuit (206) is further arranged for supplying the drive signal corresponding to the weight factors to the light source with the color associated with the sub-field period (col. 19, lines 34-47, col. 27, lines 22-34, col. 29, lines 12-22).

As to claim 6, Takeuchi teaches (Fir. 8) the display device comprises a reflective element (bottom side of light guide 20) at the side of the light guide (16) turned away from the movable element (30).

As to claim 7, Takeuchi teaches a light source (16) comprises a light emitting diode (col. 17, lines 61-64 continues in col. 18, lines 2-3).

As to claim 8, Takeuchi teaches the light source comprises a laser (col. 17, lines 61-67).

As to claim 9, Takeuchi discloses a method of driving a flat panel display (10) in a sub-field mode (col. 22, lines 34-39),

the flat panel display comprising a plurality of picture elements (Fig. 1, 14) arranged in a matrix of rows and columns (col. 12, lines 12-14),

selection electrodes (48a) and data electrodes (48b) associated with picture elements (22) in a row or column (col. 18, lines 67-68 continuous in col. 19, line 1),

and a light source (16) for generating light (col. 28, lines 8-9), the display elements being arranged, when in an active mode (ON mode), for transmitting light from the light source in conformity with received display information (col. 28, lines 8-11),

the method comprising a step of sequentially addressing the selection electrode in a first group and a second group respectively (col. 24, lines 45-49), characterized in that the method comprises a further step of evenly distributing the addressed selection electrodes (col. 24, lines 50-54) in a direction parallel to the main direction of the light flux in the light guide (20), (Fig. 4, 48a is in parallel with light guide).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Stern (U.S. Patent 5,771,321) discloses a micromechanical optical switch and flat panel display.

Urbanus (U.S. Patent 5,442,411) discloses a displaying video data on a spatial light modulator with line doubling.

Kimura (U.S. Patent 6,642,913) discloses a light modulation element, exposure unit, and flat-panel display unit.

Zhou (U.S. Patent 5,953,469) discloses an optical device utilizing optical waveguides and mechanical light-switches.

Inquiries

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pegeman Karimi whose telephone number is (571) 270-1712. The examiner can normally be reached on Monday-Thursday 8:00am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on (571) 272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pegeman Karimi
03/22/2007

